



## AIR LINE PILOTS ASSOCIATION, INTERNATIONAL

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July 9, 2001

Pratt & Whitney  
Attn: Craig R. Bolt M/S 162-24  
400 Main Street  
East Hartford, CT 06108

PW6000 Chief Systems Engineer-Validation and Certification  
M/S 162-14

Dear Mr. Bolt:

The Air Line Pilots Association, International (ALPA) does not concur with the Loads and Dynamics Harmonization Working Group (L&DHWG) report presented to TAEIG at the June 26-27, 2001 meeting. We believe that operational considerations have not been appropriately included in determining certification standards. As noted in the report, ALPA previously commented that, for an aircraft with reversible flight controls, developing a design standard predicated on the assumption that pilots would physically restrain the controls during ground operation without a specific requirement to do so was not operationally realistic. The current HWG report has no provision to either fully account for reversible controls being unrestrained by the pilot(s) or a requirement that pilots be made aware of the design assumption that the controls would be restrained during ground operation.

The report gives reasons for not making the provisions noted above, saying in part, "The L&DHWG does not feel that it is reasonable to operate an aircraft with manual control systems in design ground gust conditions with the pilot not constraining the control systems. This is supported by the FAA Flying Handbook FAA-H-8083-3 Chapter 2 for Ground Operations". This makes it clear that the certification standard relies on pilot actions to prevent control system damage. However, the proposed rule contains no provision that would ensure this design assumption becomes a part of the operational procedures for the airplane. In addition, we do not believe the citation of FAA-H 8083-3 is valid. That handbook, the re-titled Advisory Circular 61-21, is intended for pilot training in general aviation aircraft. Although the basic principles of flight remain the same regardless of aircraft size or intended use, the referenced document is clearly not intended to reflect the size, sophistication of systems, or the cockpit workload of multi-pilot aircraft in air carrier operations certified under Part 25. Some aircraft in air carrier service today (e.g. DC-9 series aircraft) have reversible controls that pilots are not able to keep from moving to the stops when blown by the wind. Irreversible control designs do not blow against the stops so pilot restraint is not required. Thus, most aircraft in airline service today are either reversible control designs in which pilot input is ineffective or irreversible control designs where pilot input is not required - further basis for pilots not knowing they are required by a particular design to resist control movement or risk control system damage and perhaps failure.

ALPA is concerned that this is an additional example of inconsistency between a certification rule and operation of the aircraft. If the rule is promulgated as proposed, we do not see how an FAA operations inspector can insure a specific carrier's aircraft operating procedure meets the needs of certification if the assumptions used in certification are not communicated to the inspector and the carrier.

Thank you for the opportunity to comment.

Sincerely,

A handwritten signature in cursive script that reads "Jim Bettcher".

Captain Jim Bettcher

Director, Aircraft Certification Program /et

JRB:ak

cc: J. Wallace